



## Technical Data Sheet

### UCARE™ Extreme Polymer

#### Features & Benefits

- Provides equivalent hair conditioning to some silicones
- Enhances dry and wet hair combing especially on damaged hair
- Restores hair hydrophobicity
- Reduces hair breakage
- Improves hair alignment and manageability
- Enhances silicone deposition on hair especially on damaged hair
- Provides soft styling benefit (ie. curl retention) in leave-on formulations
- Ease of formulation – no emulsification needed
- Enables clear products
- Acts as rheology modifier
- Helps increase natural content of formulation

#### Composition

- Polyquaternium-10

#### Applications

Areas of potential use for UCARE™ Extreme Polymer encompass a wide range of cosmetic and toiletry applications such as:

- Rinse-off conditioners
- Shampoos
- Leave-on conditioners
- Styling products
- Body washes

#### Typical Properties

Specification Writers: These values are not intended for use in preparing specifications.

Property	Unit	Result
Appearance		White powder
Viscosity (1% aqueous solution) - Brookfield 30 rpm	cPs	3000–7000
Volatiles	wt%	< 6
Nitrogen	wt%	1.50–2.20
Particle size, through 20 mesh, < 841 micron	%	95–100
Ash	wt%	< 4
Biodegradability		Inherent primary biodegradability with pre-adaptation according to OECD test(s) guidelines (reaches > 20% biodegradation in OECD test(s))

<b>Description</b>	UCARE™ Extreme Polymer is a polymeric, quaternary ammonium salt of hydroxyethylcellulose. The cellulosic polymer is derived from non-GMO and PEFC (Programme for Endorsement of Forest Certification) certified wood pulp.
<b>Recommended Use Level</b>	Between 0.1–0.3 wt%.
<b>Formulating Tips</b>	<p>There are two methods for preparing UCARE™ Extreme Polymer for incorporation into formulation.</p> <p>Direct addition to the aqueous phase:</p> <ul style="list-style-type: none"> <li>UCARE™ Extreme Polymer can be incorporated into the aqueous phase of the formulation directly without pre-dissolving in water.</li> </ul> <p>Prior polymer hydration:</p> <ul style="list-style-type: none"> <li>Hydration of the polymer is accomplished by slowly adding the dry powder into agitated room temperature water and allowing it to mix until the solution is uniform and clear.</li> <li>Hydration can be accelerated by heating the solution to 65°C.</li> <li>Once the polymer is fully hydrated, simply add the solution directly to the surfactant system blend with mixing.</li> <li>Hydration may be accomplished separately or as a first step in the manufacturing procedure.</li> </ul>
<b>Handling Precautions</b>	PRODUCT SAFETY INFORMATION REQUIRED FOR SAFE USE IS NOT INCLUDED IN THIS DOCUMENT. BEFORE HANDLING, READ PRODUCT AND SAFETY DATA SHEETS AND CONTAINER LABELS FOR SAFE USE, PHYSICAL AND HEALTH HAZARD INFORMATION. THE SAFETY DATA SHEET IS AVAILABLE ON THE DOW WEBSITE AT DOW.COM, OR FROM YOUR DOW SALES APPLICATION ENGINEER, OR DISTRIBUTOR, OR BY CALLING DOW CUSTOMER SERVICE.
<b>Usable Life and Storage</b>	Store in a dry place. Protect from atmospheric moisture. Avoid prolonged exposure to heat and air. When stored at or below 25°C in the original unopened containers, this product has a usable life of 24 months from the date of production.
<b>Limitations</b>	This product is neither tested nor represented as suitable for medical or pharmaceutical uses.
<b>Health and Environmental Information</b>	<p>To support customers in their product safety needs, Dow has an extensive Product Stewardship organization and a team of product safety and regulatory compliance specialists available in each area.</p> <p>For further information, please see our website, <a href="http://dow.com">dow.com</a> or consult your local Dow representative.</p>

## **Disposal Considerations**

Dispose in accordance with all local, state (provincial) and federal regulations. Empty containers may contain hazardous residues. This material and its container must be disposed in a safe and legal manner.

It is the user's responsibility to verify that treatment and disposal procedures comply with local, state (provincial) and federal regulations. Contact your Dow Technical Representative for more information.

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